

COMPUTER SYSTEMS ANALYST

Computer Systems Analyst

Computer Systems Analysts help solve computer problems and use computer technology to meet the needs of an organization. They decide how data is collected, prepared, processed, stored and made available for users. It is their job to incorporate rapidly changing technologies into existing systems. They may also design completely new systems and create ways to apply existing systems' resources to additional tasks.

Education Requirements: Two-Year Associate's degree,
Four-Year Bachelor's degree



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CHIEF INFORMATION OFFICER

Chief Information Officer

Chief Information Officers are responsible for the overall technological direction of their organizations. They propose budgets for projects and programs and make decisions on staff training and equipment purchases. They hire and assign computer specialists, information technology workers and support personnel to carry out specific parts of the projects. They supervise the work of these employees and establish administrative procedures and policies.

Education Requirements: Four-Year Bachelor's degree



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MANAGEMENT INFORMATION SYSTEM (MIS) DIRECTOR

Management Information System (MIS) Director

Management Information System (MIS) Directors manage computing resources for their organizations. They often work under the chief information officer to plan and direct the work of information technology employees. These MIS Directors ensure the availability, continuity and security of data and information technology services in their organizations. In this capacity, they oversee a variety of user services such as an organization's help desk and may also make hardware and software upgrade recommendations.

Education Requirements: Four-Year Bachelor's degree,
Master's degree



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OPERATIONS RESEARCH ANALYST

Operations Research Analyst

Operations Research Analysts are problem solvers, whose job is to tackle major problems encountered by large business organizations. They apply scientific and mathematical principles to organizational problems, present their findings to management and work with the staff to make sure the solution is put into place in the company. Major employers include manufacturers, transportation companies, telephone service utilities, banks, insurance companies and government agencies, including the armed forces. Because their projects are of immediate concern to management, they may frequently work overtime to meet deadlines.

Education Requirements: Four-Year Bachelor's degree



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ELECTRONIC MARKETING MANAGER

Electronic Marketing Manager

Electronic Marketing Managers oversee an organization's electronic advertising efforts. They develop the firm's marketing strategy, identify potential markets and are responsible for Internet, TV and radio ad design and placement. Working with sales, product development and other managers, they monitor trends that indicate the need for new products and services and they oversee product development. Some specialize in Internet-based marketing efforts such as improving search engine placement and analyzing how customers use websites.

Education Requirements: Four-Year Bachelor's degree



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INFORMATION TECHNOLOGY (IT) PROJECT MANAGER

Information Technology (IT) Project Manager

Information Technology (IT) Project Managers coordinate all IT projects to ensure that company resources are utilized appropriately. They develop requirements, budgets and schedules for their firm's information technology projects. While coordinating projects from development through completion, they work with internal and external clients, vendors, consultants and computer specialists. IT Project Managers are increasingly involved in projects that upgrade the information security of an organization.

Education Requirements: Four-Year Bachelor's degree



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NETWORK ADMINISTRATOR

Network Administrator

Network Administrators design, install and support an organization's computer systems. They maintain network hardware and software, analyze problems and monitor networks and Internet systems to ensure their availability to system users. They work in a variety of environments, including professional offices, small businesses, government organizations and large corporations. As networks continue to expand and more work is done remotely, there is a greater need to communicate with and oversee the technology enabling employees to work offsite.

Education Requirements: Four-Year Bachelor's degree



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WEBSITE DESIGNER

Website Designer

Website Designers layout and construct web pages and websites. They are generally broken down into web masters and web developers. Web masters are responsible for all technical aspects of a website, including performance issues such as speed of access and approval for the content of the website. Web developers are responsible for day-to-day website creation and design. With the expansion of the Internet, there is enormous growth in this field.

Education Requirements: Four-Year Bachelor's degree



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DATABASE ADMINISTRATOR

Database Administrator

Database Administrators work with database-management-systems software and determine ways to organize and store data. They identify user needs and set up new computer databases. In many cases, Database Administrators must work information from outdated systems into a new system. They also test and coordinate modifications to the system when needed and troubleshoot problems when they occur. An organization's Database Administrator ensures the performance of the system, understands the platform on which the database runs and adds new users to the system.

Education Requirements: Four-Year Bachelor's degree



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SOFTWARE DESIGNER

Software Designer

Software Designers create and design computer software programs. They outline a general plan for the program and then write or oversee the programming of code that enables the technical aspects of the program to work properly. After the software program is functional, Software Designers then focus their attention on the “look” or interface of the program. They develop the graphics and sound effects that the user of the product will experience. Understanding how end users will work with the computer program is an important part of their job.

Education Requirements: Two-Year Associate’s degree,
Four-Year Bachelor’s degree




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COMPUTER PROGRAMMER

Computer Programmer

Computer Programmers write step-by-step instructions, called programs, that computers follow to perform intended functions. With software designers, they concept, design and test logical structures for solving problems with computers. Many technical innovations in programming—such as advanced computing technologies and more sophisticated and new languages and programming tools—have added to the complexity and training required for this job. Programmers spend the majority of their time in front of a computer terminal and as telecommuting becomes more common they tend to work more from remote locations.

Education Requirements: Two-Year Associate's degree,
Four-Year Bachelor's degree



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TECHNICAL WRITER

Technical Writer

Technical Writers translate technical information into easily understandable language. They write repair manuals, catalogs, parts lists, operating instructions, sales promotional materials and technical reports related to information technology. Technical Writers plan technical materials and oversee the preparation of illustrations, photographs, diagrams and charts. Technical Writers also may serve as part of a team conducting studies to help improve the design of a product that still is in the example stage.

Education Requirements: Two-Year Associate's degree,
Four-Year Bachelor's degree



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HELP DESK SUPPORT TECHNICIAN

Help Desk Support Technician

Help Desk Support Technicians respond to telephone calls and e-mail messages from customers looking for help with computer problems. In responding to these inquiries, they must listen carefully to the customer, ask questions to diagnose the nature of the problem and then patiently walk the customer through the problem-solving steps. Companies value Help Desk Support Technicians as a source of feedback on their products and they are consulted for information about what gives customers the most trouble as well as other customer concerns.

Education Requirements: Two-Year Associate's degree



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COMPUTER SUPPORT SPECIALIST

Computer Support Specialist

Computer Support Specialists provide technical assistance, support and advice to end users. These troubleshooters interpret problems and provide technical support for hardware and software issues. In many companies, level one help desk support technicians field the initial calls. If more expertise is needed, the inquiries are forwarded to Computer Support Specialists with proficiencies in at least one of several areas—such as hardware, software or networking. Computer Support Specialists work either within a company that uses computers or directly for a computer hardware or software vendor.

Education Requirements: Two-Year Associate's degree



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ELECTRONICS TECHNICIAN

Electronics Technician

Electronics Technicians design and create electronic equipment and machines using plans drawn by engineers. They work on household appliances, robots, computers, medical equipment and even radar or sonar equipment. Most Electronics Technicians work regular hours in laboratories, offices, electronics and industrial plants or construction sites. Some Electronics Technicians may be exposed to hazards from equipment, chemicals or toxic materials.

Education Requirements: High School diploma,
Two-Year Associate's degree



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